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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Preparation for International Telecommunication Union World Radiocommunication Conferences	IC Docket No. 94-31

Comments of AirTouch Communications

AirTouch Communications ("AirTouch")(formerly PacTel Corporation) hereby comments on portions of the Notice of Inquiry ("NOI") seeking input to assist the Commission in formulating U.S. positions for the upcoming 1995 World Radiocommunication Conference ("WRC-95").[1/] AirTouch is one of the world's leading providers of mobile services through cellular and other terrestrial systems. In addition, AirTouch is a limited partner in GLOBALSTAR, L.P., the entity formed to obtain investment in and coordinate international service for the proposed GLOBALSTAR low-Earth orbit ("LEO") mobile satellite system to be operated by Loral/QUALCOMM Partnership, L.P. ("LQP"). AirTouch intends to provide LEO mobile satellite services through GLOBALSTAR in several countries around the world, including the United States,

1/ Preparation for International Telecommunication Union World Radiocommunication Conferences, IC Docket No. 94-31, FCC 94-96, released May 5, 1994 ("NOI").

and thus is very interested in the successful adoption of international allocations and procedures that will facilitate the global development of LEO mobile satellite services.

Commercial low-Earth orbit satellite systems are a relatively new phenomenon, taking advantage of advances in satellite and launch vehicle technologies that make such systems practical. The operation of the satellites much closer to the Earth's surface than geostationary satellites allows users to communicate with the satellites via small, low-cost hand-held transceivers. Operation of the satellites in low-Earth orbit requires a constellation of satellites to provide service availability because of the movement of the satellites relative to the surface of the Earth. One major benefit of this characteristic is that once the satellite constellation is launched to provide service in the United States, those same satellites will be able to provide service throughout the world with only a small incremental investment in gateway earth stations.

The use of a constellation of spacecraft means that LEO mobile satellite systems will be able to provide valuable services to underserved markets throughout the world. In addition, within the United States, LEO mobile satellite systems can economically provide ubiquitous service and thereby meet demand in markets where terrestrial services would be uneconomical and thus unavailable. As a result, businesses can operate more efficiently, jobs will be created, export opportunities will develop, and critical communications needs can be fulfilled.

The global nature of LEO mobile satellite systems also magnifies the importance of international allocations and procedures to ensure the successful coordination of these systems. The value of these systems and the need for global allocations was recognized at the 1992 World Administrative Radio Conference ("WARC-92") in Torremolinos, Spain, which allocated spectrum and adopted procedures for the international coordination of non-geostationary satellite systems. These initial steps were crucial for the development of LEO mobile satellite services.

At WRC-95 the Commission should seek to continue the significant strides taken at WARC-92, and to implement additional international allocations and regulations which will ensure that the potential benefits of LEO mobile satellite systems are fully realized. Timing is critical, and failure to act at WRC-95 could significantly delay the planned deployment of the initial commercial LEO mobile satellite systems well beyond the current 1998 schedule. Thus, AirTouch urges the United States to maintain LEO mobile satellite services as the primary focus of WRC-95.

As one important means of maintaining the focus of WRC-95 on mobile satellite issues, the United States should seek the deferral of consideration of the Report of the Voluntary Group for Experts ("VGE"). Given the limited amount of time available at the conference, the delegates are likely to get bogged down in debates concerning widespread reform of the ITU processes, and thus ignore the other more time-sensitive issues regarding mobile satellite services. In addition, the deferral of the VGE report

will provide Administrations with sufficient time to fully review and analyze that Report.

The focus of WRC-95 must be on LEO MSS because the actions taken at WARC-92 were necessary, but not sufficient, to facilitate the development of these services. AirTouch urges the Commission to seek the adoption of the following additional actions at WRC-95 to ensure the prompt and successful deployment of LEO mobile satellite systems, which will allow the United States to enjoy all of the potential benefits of these new services.

A. Spectrum Allocation Issues

WARC-92 allocated spectrum above 1 GHz for non-geostationary satellite systems that can be used for the initial subscriber link needs of several systems. A necessary corollary to that spectrum is feeder link spectrum, which is essential for system operations. AirTouch urges the Commission to seek global allocations at WRC-95 to accommodate the feeder link requests of the current applicants, including LQP's request for feeder link spectrum in the C-Band.

In its comments on the licensing and service rules for LEO mobile satellite service, AirTouch explained in great detail the relative advantages, from a service provider's perspective, of operating feeder links in the C-Band.[2/] C-Band is clearly the best of the alternatives because of the propagation

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2/ See generally, AirTouch Comments in CC Docket No. 92-166 (May 5, 1994) at pp. 13-17.

characteristics, spectrum efficiencies and cost advantages. Moreover, unlike the 28 GHz band, the satellite and Earth station technology for the C-Band is already fully developed.

AirTouch also believes that LEO mobile satellite systems should have no problems coordinating their use of the C-Band. In the C-Band, the LEO satellite systems will be able to share the spectrum with geostationary systems through reverse band operations. The gateway operators will also be able readily to coordinate with terrestrial users in the C-Band, because the gateway operators will have substantial flexibility in where they locate the gateways.

These benefits of feeder link operations in the C-Band, including lower costs and more reliable service, will be enjoyed by GLOBALSTAR's customers, but only if global regulations adopted at WRC-95 permit LEO satellite system feeder links in the C-Band. Thus, AirTouch strongly urges the United States to seek allocations at WRC-95 to accommodate feeder link operations in the C-Band for LEO mobile satellite systems.

AirTouch also believes that the Commission should utilize WRC-95 to begin the process of making additional spectrum available for the LEO satellite service subscriber links. AirTouch believes that the anticipated growth in demand will soon exhaust the capacity of the LEO mobile satellite systems. The second generation systems will thus need access to additional spectrum. In addition, other countries have indicated an interest in authorizing additional MSS systems, which may use the same frequencies as first generation U.S. systems. Therefore, AirTouch urges the Commission at WRC-95 to seek additional

spectrum above 1 GHz for LEO mobile satellite systems. In that regard, the Commission should consider seeking at WRC-95 a global allocation to mobile satellite services of the spectrum the U.S. government will be making available to the private sector pursuant to the legislation introduced by Chairman Dingell.[3/]

By initiating steps now for securing additional global allocations of spectrum above 1 GHz for mobile satellite systems, the Commission can help ensure that adequate spectrum will be available to meet the expected large growth in demand for LEO mobile satellite services. Thus, AirTouch urges the Commission to seek the adoption of allocations at WRC-95, consistent with Agenda Item 3(d), including feeder link spectrum in the C-Band and additional subscriber link bandwidth above 1 GHz.

B. Enhancing the Utility of the Current Allocations

AirTouch also recommends that the United States seek some minor modifications to or clarifications of the international regulations and footnotes to ensure that the spectrum that is allocated to LEO mobile satellite service can be used efficiently and effectively. First, as suggested in the NOI, AirTouch supports the proposal to interpret or clarify RR 2613 to ensure that feeder links for non-geostationary mobile satellite service are not relegated to a secondary status. AirTouch also urges the Commission to seek a modification of FN

3/ Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET Docket No. 94-32, FCC 94-97, released May 4, 1994; Preliminary Spectrum Reallocation Report, U.S. Department of Commerce, NTIA Special Publication 94-27, February, 1994.

753F so that in the 2483.5-2500 MHz band, the power-flux density limits are increased to allow CDMA to be used effectively in this band and to eliminate needless coordinations with terrestrial systems. LQP demonstrated in its initial comments in the licensing and service rules proceeding that such an increase will not adversely affect the terrestrial users currently utilizing that band.[4/] Such an increase will expand capacity (and lower per circuit costs) without causing any additional harm to the current terrestrial users.

In addition, AirTouch believes the United States should revise Footnote 731E to limit the protection afforded GLONASS receivers so that LEO mobile satellite systems can make full use of the 1610-1626.5 MHz band. Restricting the protection of GLONASS to below 1606 MHz will still allow the use of GLONASS in the Global Navigation Satellite System, while also enhancing the ability of LEO mobile satellite systems to function effectively. Finally, AirTouch urges the Commission to seek clarification or modification of the Resolution 46 procedures for international coordination of LEO satellite systems to ensure that any ambiguity surrounding these new processes not be a cause for delay. In light of the inherently global operations of LEO satellite systems, streamlined and clearly understood procedures are necessary to ensure that international coordinations are concluded in a timely manner.

AirTouch does not believe that any of these modifications or clarifications should slow down the license and

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4/ LQP Comments in CC Docket No. 92-166 (May 5, 1994) at pp. 3-6 and 20-24.

service rule proceedings currently before the Commission in CC Docket No. 92-166. To the extent that it becomes necessary to adjust operating parameters to ensure consistency with any international requirements adopted at WRC-95, such operating conditions can be addressed in the licensing phase. For example, should it become necessary, power-flux density limits could be incorporated as a condition of the licenses; the Commission need not defer acting on the rulemaking proceeding while awaiting the adoption of international parameters. The Commission should continue to push ahead with its rulemaking to ensure that the United States maintains its leadership position with regard to LEO mobile satellite services.

CONCLUSION

The United States enjoyed a great deal of success at WARC-92 in laying the groundwork for LEO mobile satellite services. The United States must build on that momentum, and seek at WRC-95 to achieve further advances in support of LEO mobile satellite services, including permitting the use of C-Band spectrum for feeder links and the allocation of additional bandwidth for subscriber links. The Commission should also push for modifications and clarifications of the international regulations and footnotes to ensure that the utility of the spectrum allocated to LEO mobile satellite service is maximized. By adopting these positions at WRC-95, the Commission will facilitate the rapid deployment of these valuable new services,

which will advance the public interest by creating new jobs, serving unmet needs, and promoting export opportunities.

Respectfully submitted,

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